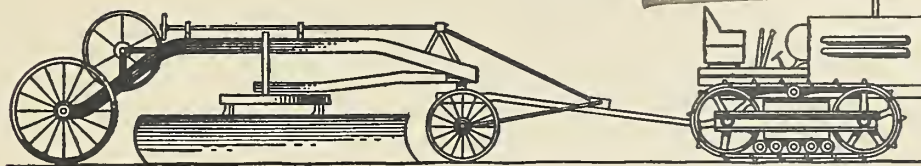


Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

CONSTRUCTION



HINTS

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE
WASHINGTON, D. C.

Vol. 4

July 9, 1938

No. 13

MOTOR BREAK-IN STAND

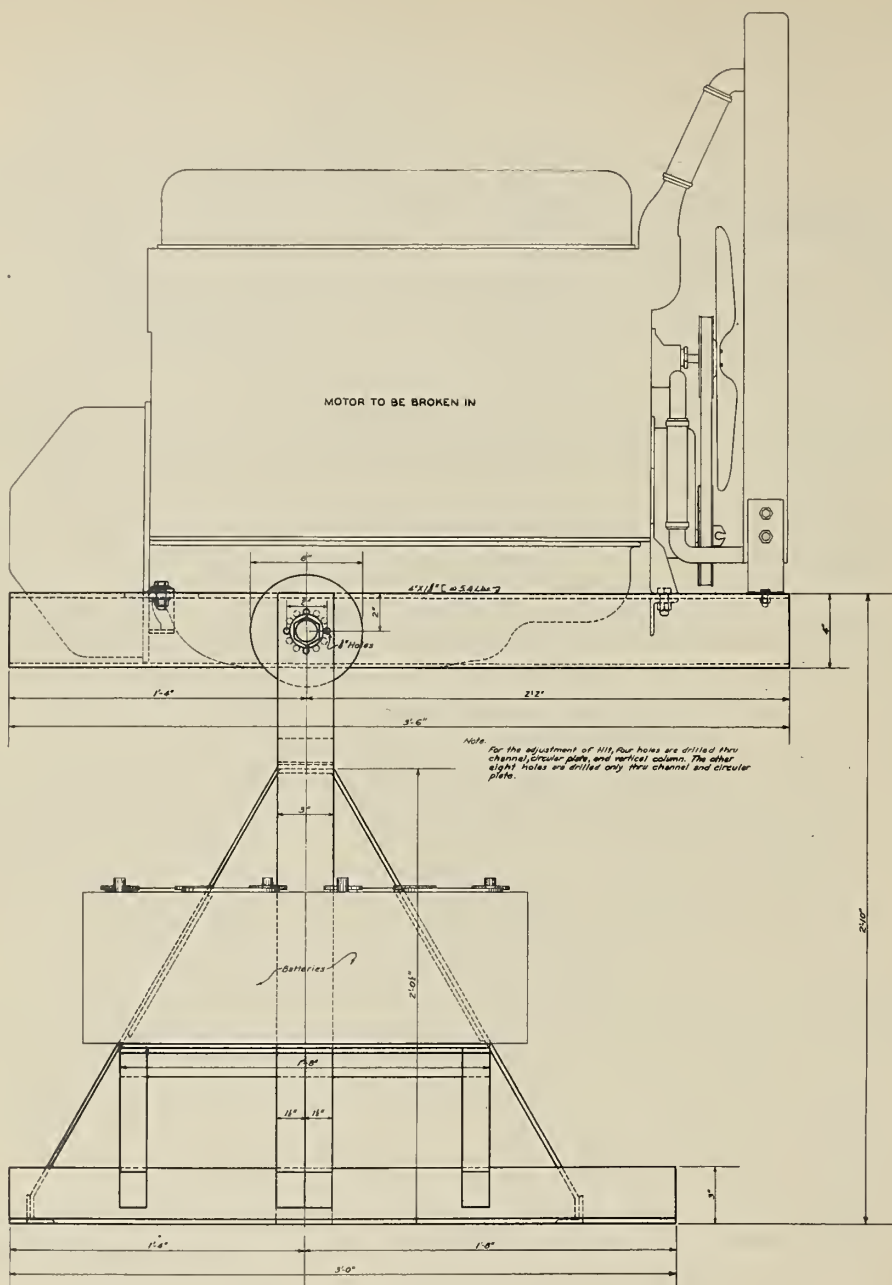
Submitted by Region 8 for
Central Repair Shops

This plan does not provide for an auxiliary power unit, as it is considered that unless a motor is set up too tight in the beginning, it can be started with two well charged six-volt storage batteries. After the motor is started one battery should be disconnected to avoid possible damage to the ignition system.

The advantage of having a motor break-in stand of this type is that it furnishes a convenient stand to set the motor in to be limbered up, after which it can easily be inspected and final adjustments made before it is placed in the equipment. In the event there are any corrections to be made this can be done with a minimum of effort by merely draining the oil and water, removing the locking bolts and tilting the motor to any desired angle where it can again be locked.

This design provides for only one motor, but as many stands as are needed can be used. It is believed that at least three will be needed for each shop.

(Over)



SIDE ELEVATION

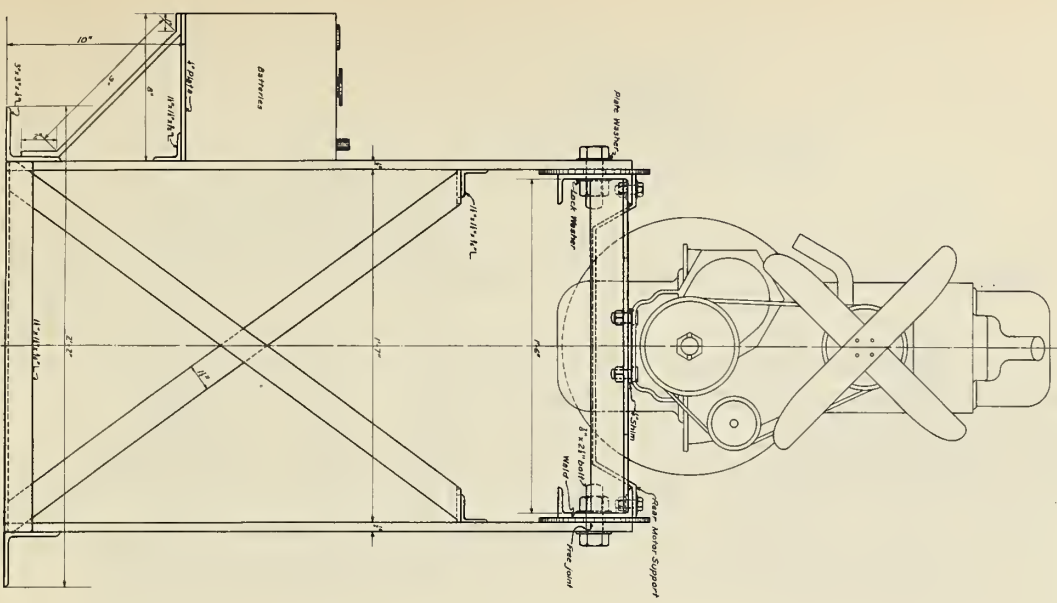
U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION 8 R. E. PIDGEON REGIONAL ENGR

MOTOR
BREAK-IN
STAND

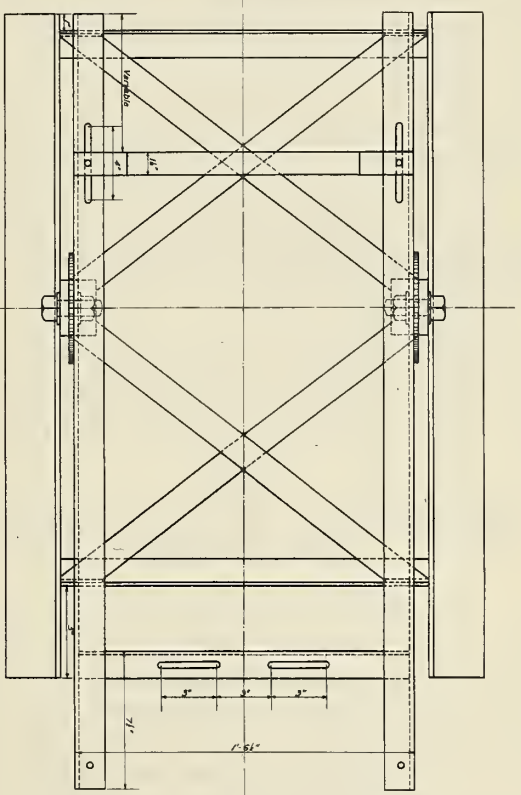
DESIGNED BY 485 DRAWN BY 485
SCALE 3/4" CHECKED BY 485
APPROVED 485 DATE 485

SHEET 1 OF 2 DRAWING M-3401

FRONT ELEVATION
(RADIATOR REMOVED)

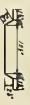


PLAN
(RADIATOR, MOTOR, AND BATTERY RACK REMOVED)



NO.	QTY.	SIZE	LENGTH	AREA
1	1	1/2\" x 1/2\"	5'-0"	2.50
2	1	1/2\" x 1/2\"	7'-0"	3.50
3	1	1/2\" x 1/2\"	5'-0"	2.50
4	1	1/2\" x 1/2\"	5'-0"	2.50
5	1	1/2\" x 1/2\"	5'-0"	2.50
6	1	1/2\" x 1/2\"	5'-0"	2.50
7	1	1/2\" x 1/2\"	5'-0"	2.50
8	1	1/2\" x 1/2\"	5'-0"	2.50
9	1	1/2\" x 1/2\"	5'-0"	2.50
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94	1	1/2\" x 1/2\"	5'-0"	2.50
95	1	1/2\" x 1/2\"	5'-0"	2.50
96	1	1/2\" x 1/2\"	5'-0"	2.50
97	1	1/2\" x 1/2\"	5'-0"	2.50
98	1	1/2\" x 1/2\"	5'-0"	2.50
99	1	1/2\" x 1/2\"	5'-0"	2.50
100	1	1/2\" x 1/2\"	5'-0"	2.50

*Drawing Details:



NOTES
ALL STEEL TO BE ONLY HEAVY STRUCTURAL GRADE
ALL JOINTS TO BE WELDED UNLESS OTHERWISE SPECIFIED
SUPPORTS TO BE ADJUSTED TO FIT INDIVIDUAL MOTOR
CHANNELS TO THE VERTICAL COLUMNS MAY BE VARIED
SO AS TO PLACE THE COLUMN AS NEAR THE CENTER
OF GRAVITY OF THE MOTOR AS POSSIBLE.

SHOP HINTS
from
Commercial Car Journal
June, 1938

1. Sleeve Puller, by T. Buns, Bise Transfer Co., Cincinnati, Ohio.

We made a full-surface sleeve puller, using the usual method of pulling by means of a threaded rod. For the bottom or contact piece, we use an old Timken bearing cone. A 3/8" piece of steel is welded into the cone at the largest point in the taper and the steel is drilled for the threaded rod. The shoulder on the cone gives a full bearing on the bottom of the sleeve. A Timken No. F566M fits the cylinder sleeves of the B4 International. Other cones can be used for various size sleeves.

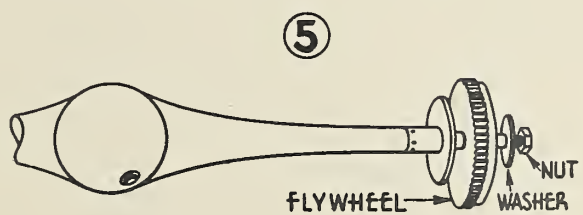
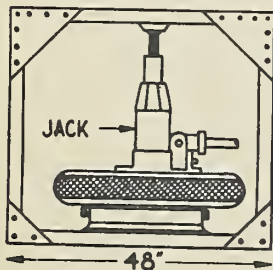
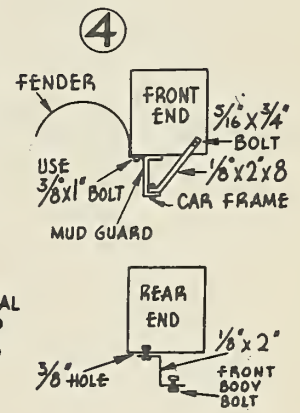
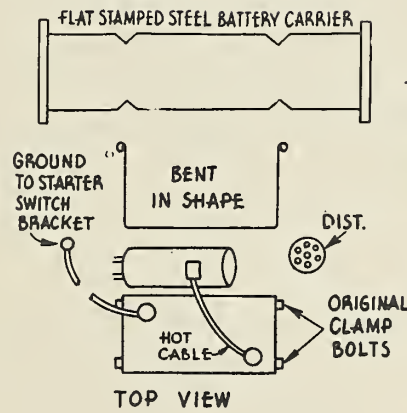
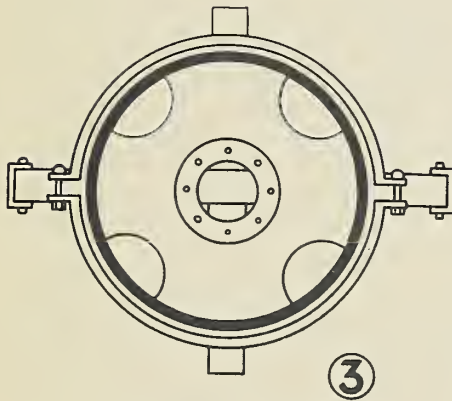
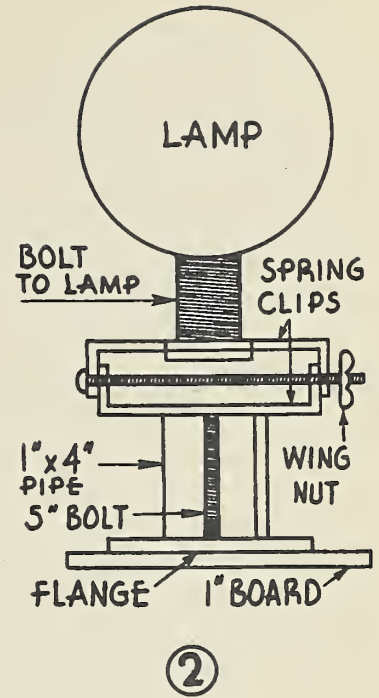
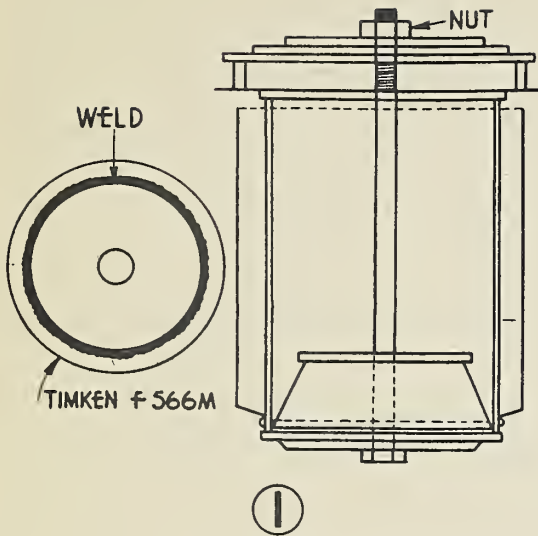
2. Portable Light, by Robert V. Poor, Dedham and Hyde Park Gas Company, Hyde Park, Mass.

We had some trouble getting suitable lights for our street crews to use in trenches at night while taking care of gas leaks. We finally made some from headlights taken from old trucks. We took a spring clip and drilled it to fit the bolt that comes out of the bottom of the lamp so that the bolt could be inserted through the center of the clip. A nut holds the light tight to the clip which is turned prongs down. Another clip turned prongs up is drilled 5" for a threaded rod which is inserted through a 1 ft. sq. board about 1" thick. Horizontal drilling through the prongs of the clips and insertion of another threaded rod with a wing nut provides for the light to be set at any angle.

A 4" length of pipe screwed into a pipe flange which in turn screwed to the floorboard makes the light stay upright. A 32 cp. bulb is used in the light which is connected to a plug in the instrument panel.

3. Tire Jack, by W. W. Scott, Pinellas Lumber Co., St. Petersburg, Florida.

To eliminate brute labor in removing large tires from wheels, I took an old type lock rim and cut it in half, welding lugs on it to make it adjustable for size. From an old truck frame I made a frame of channel iron. Now, to remove a tire I simply adjust the old rim so that the tire rests on it, set a hydraulic jack on the wheel and back it against the top of the frame and the jack pushes the wheel right out of the tire without damage to either.



4. Battery Box, by R. C. Balzer, Montgomery, Ala.

I think every fleet of over three trucks should have the battery mounted under the hood to save time in servicing. The drawing illustrates one doped out for Chevrolet which costs \$.65 list and can be made in two hours. The flat sheet battery carrier can be bought from your jobber for \$.50 and all of the old leads and clamps can be used. After the batteries have been mounted under the hood, five batteries can be serviced while you would be getting the floorboards out of the conventional truck.

5. Axle Shaft Puller, by Ernest Martin, 209 S. 18th St., Fort Smith, Arkansas.

Axle shafts can be removed quite easily from semi-floating axles even when you do not have the correct type inertia puller. Simply slip an old flywheel on the taper of the axle shaft and then a washer sufficiently large so that the center opening of the flywheel will not pass over it. Use the wheel lock nut to hold the washer in place and then slide the flywheel back and forth as a hammer. The shaft will come.

6. Bleeding Practice, by Billie Burgan, Hage's Ice Cream Ltd., San Diego, California.

We found that we could not get rid of all the air in vertical brake cylinders until we removed the two holding screws, loosened the fluid connection and turned the cylinder horizontal. In this position we set the fluid connection snug and did the bleeding. After bleeding loosen connection, return to vertical, start screws and tighten connection.

Signs of Safety

If you want to live tomorrow - You must be careful today!